

The following edits **(in red with yellow highlights)** have been submitted to the House Environment and Energy Committee by 350VT, Partnership for Policy Integrity, Standing Trees, and Vermonters for a Clean Environment.

Our organizations support the removal of biofuels (gas, mass, liquid) and hydrogen as eligible for clean heat credits in the AHA. If the Legislature is unwilling to do this, we ask for a complete cap and phase out of all biofuels and hydrogen.

We recommend removing reference to the GREET model for the emissions accounting because that model treats CO2 emissions from burning biogenic fuels as zero, and thus undercounts actual GHG emissions. The GREET model was developed for transportation fuels and is not applicable to burning woody biomass. In addition, there is no IPCC GHG emissions accounting model, so we recommend removing that as well.

In addition, our organizations support the exclusion of combustion-based district heating services from clean heat credits, such as heat produced from biomass combustion. If the Legislature is unwilling to do this, such combustion units must at least meet a 60% efficiency standard.

Finally, S.5 includes “advanced wood heating” on the list of “eligible clean heat measures.” The bill does not define “advanced wood heating.” In addition to GHG emissions, wood heating is highly polluting and a major source of fine particulate (PM2.5) emissions in Vermont.

Two recent assessments of EPA’s certification testing program for residential wood heaters have shown that it is inadequate for assessing emissions: the Northeast States for Coordinated Air Use Management (NESCAUM), of which Vermont DEC is a member, and confirmed by the USEPA Office of Inspector General in February 2023.

We recommend at minimum delaying any inclusion of “advanced wood heating” until:

- 1) EPA promulgates updated New Source Performance Standards (NSPS) for residential wood heaters;**
- 2) EPA promulgates new National Ambient Air Quality Standards (NAAQS) for PM 2.5 emissions.**

S.5

An act relating to affordably meeting the mandated greenhouse gas reductions for the thermal sector through efficiency, weatherization measures, electrification, and decarbonization

It is hereby enacted by the General Assembly of the State of Vermont:

Sec. 1. SHORT TITLE

This act shall be known and may be cited as the “Affordable Heat Act.”

Sec. 2. FINDINGS

The General Assembly finds:

(1) All of the legislative findings made in 2020 Acts and Resolves No. 153, Sec. 2, the Vermont Global Warming Solutions Act of 2020 (GWSA), remain true and are incorporated by reference here.

(2) Under the GWSA and 10 V.S.A. § 578, Vermont has a legal obligation to reduce greenhouse gas emissions to specific levels by 2025, 2030, and 2050.

(3) The Vermont Climate Council was established under the GWSA and was tasked with, among other things, recommending necessary legislation to reduce greenhouse gas emissions. The Initial Vermont Climate Action Plan calls for the General Assembly to adopt legislation authorizing the Public Utility Commission to administer the Clean Heat Standard consistent

with the recommendations of the Energy Action Network's Clean Heat Standard

Working Group.

(4) As required by the GWSA, the Vermont Climate Council published the Initial Vermont Climate Action Plan on December 1, 2021. As noted in that plan, over one-third of Vermont's greenhouse gas emissions in 2018 came from the thermal sector. In that year, approximately 72 percent of Vermont's thermal energy use was fossil based, including 29 percent from the burning of heating oil, 24 percent from fossil gas, and 19 percent from propane.

(5) To meet the greenhouse gas emission reductions required by the GWSA, Vermont needs to transition away from its current carbon-intensive building heating practices to lower-carbon alternatives. It also needs to do this equitably, recognizing economic effects on energy users, especially energyburdened users; on the workforce currently providing these services; and on the overall economy.

(6) Vermonters have an unprecedented opportunity to invest in eligible clean heat measures with funding from new federal laws including, the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act of 2022.

Sec. 3. 30 V.S.A. chapter 94 is added to read:

CHAPTER 94. CLEAN HEAT STANDARD

§ 8121. INTENT

Pursuant to 2 V.S.A. § 205(a), it is the intent of the General Assembly that the Clean Heat Standard be designed and implemented in a manner that achieves Vermont's thermal sector greenhouse gas emissions reductions necessary to meet the requirements of 10 V.S.A. § 578(a)(2) and (3), minimizes costs to customers, protects public health, and recognizes that affordable heating is essential for Vermonters. It shall enhance social equity by prioritizing customers with low income and moderate income and those households with the highest energy burdens. The Clean Heat Standard shall, to the greatest extent possible, maximize the use of available federal funds to deliver clean heat measures.

§ 8122. CLEAN HEAT STANDARD

(a) The Clean Heat Standard is established. Under this program, obligated parties shall reduce greenhouse gas emissions attributable to the Vermont thermal sector by retiring required amounts of clean heat credits to meet the thermal sector portion of the greenhouse gas emission reduction obligations of the Global Warming Solutions Act.

(b) By rule or order, the Commission shall establish or adopt a system of tradeable clean heat credits earned from the delivery of clean heat measures that reduce greenhouse gas emissions.

(c) An obligated party may obtain the required amount of clean heat credits through delivery of eligible clean heat measures, through contracts for delivery of eligible clean heat measures, through the market purchase of clean heat credits, or through delivery of eligible clean heat measures by a designated statewide default delivery agent. An obligated party shall inform the Commission of how it plans to meet its obligation through the process described in section 8125 of this title.

(d) The Commission shall adopt rules and may issue orders to implement and enforce the Clean Heat Standard program.

§ 8123. DEFINITIONS

As used in this chapter:

(1) “Carbon intensity value” means the amount of lifecycle greenhouse gas emissions per unit of energy of fuel expressed in grams of carbon dioxide equivalent per megajoule (gCO₂e/MJ).

(2) “Clean heat credit” means a tradeable, nontangible commodity that represents the amount of greenhouse gas reduction attributable to a clean

heat measure. The Commission shall establish a system of management for clean heat credits pursuant to this chapter.

(3) “Clean heat measure” means fuel delivered and technologies installed to end-use customers in Vermont that reduce greenhouse gas emissions from the thermal sector. Clean heat measures shall not include switching from one fossil fuel use to another fossil fuel use. The Commission may adopt a list of acceptable actions that qualify as clean heat measures.

(4) “Commission” means the Public Utility Commission.

(5) “Customer with low income” means a customer with a household income of up to 60 percent of area median income as published annually by the U.S. Department of Housing and Urban Development.

(6) “Customer with moderate income” means a customer with a household income between 60 percent and 120 percent of area median income as published annually by the U.S. Department of Housing and Urban Development.

(7) “Default delivery agent” means an entity designated by the Commission to provide services that generate clean heat measures.

(8) “Energy burden” means the annual spending on thermal energy as a percentage of household income.

(9) “Entity” means any individual, trustee, agency, partnership, association, corporation, company, municipality, political subdivision, or any other form of organization.

(10) “Fuel pathway” means a detailed description of all stages of fuel production and use for any particular fuel, including feedstock generation or extraction, production, transportation, distribution, and combustion of the fuel by the consumer. The fuel pathway is used in the calculation of the carbon intensity value and lifecycle greenhouse gas emissions of each fuel.

(11) “Heating fuel” means fossil-based heating fuel, including oil, propane, natural gas, coal, and kerosene.

(12) “Obligated party” means:

(A) a regulated natural gas utility serving customers in Vermont; or

(B) for other heating fuels, the entity that imports heating fuel for ultimate consumption within the State, or the entity that produces, refines, manufactures, or compounds heating fuel within the State for ultimate consumption within the State. For the purpose of this section, the entity that imports heating fuel is the entity that has ownership title to the heating fuel at the time it is brought into Vermont.

(13) “Thermal sector” has the same meaning as the “Residential, Commercial and Industrial Fuel Use” sector as used in the Vermont

(14) “Green hydrogen” means hydrogen gas produced by splitting water into hydrogen and oxygen using only (100%) renewable electricity from in-state Tier 2 sources

(15) “Advanced wood heating” means a wood fueled heating system that meets best available standards for fuel conversion efficiency and emissions controls, including emissions of particulate matter sized 2.5 microns or less and carbon monoxide and other air pollutants.

Greenhouse Gas Emissions Inventory and Forecast.

§ 8124. CLEAN HEAT STANDARD COMPLIANCE

(a) Required amounts.

(1) The Commission shall establish the number of clean heat credits that each obligated party is required to retire each calendar year. The size of the annual requirement shall be set at a pace sufficient for Vermont’s thermal sector to achieve lifecycle carbon dioxide equivalent (CO₂e) emission reductions consistent with the requirements of 10 V.S.A. § 578(a)(2) and (3) expressed as lifecycle greenhouse gas emissions pursuant to subsection 8127(g) of this title.

(2) Annual requirements shall be expressed as a percent of each obligated party’s contribution to the thermal sector’s lifecycle

CO2e emissions in the previous year. The annual percentage reduction shall be the same for all obligated parties. To ensure understanding among obligated parties, the Commission shall publicly provide a description of the annual requirements in plain terms with translation services available.

(3) To support the ability of the obligated parties to plan for the future, the Commission shall establish and update annual clean heat credit requirements for the next 10 years. Every three years, the Commission shall extend the requirements three years; shall assess emission reductions actually achieved in the thermal sector; shall review the methodology used for calculating the emissions schedule; and, if necessary, revise the pace of clean heat credit requirements for future years to ensure that the thermal sector portion of the emission reduction requirements of 10 V.S.A. § 578(a)(2) and (3) for 2030 and 2050 will be achieved.

(4) The Commission may temporarily, for a period not to exceed 18 months, adjust the annual requirements for good cause after notice and opportunity for public process. Good cause may include a shortage of clean heat credits or undue adverse financial impacts on particular customers or demographic segments. The

Commission shall ensure that any downward adjustment does not materially affect the State's ability to comply with the requirements of 10 V.S.A. § 578(a)(2) and (3).

(b) Annual registration.

(1) Each entity that sells heating fuel into or in Vermont shall register annually with the Commission by an annual deadline established by the Commission. The first registration deadline is January 31, 2024, and the annual deadline shall remain January 31 of each year unless a different deadline is established by the Commission. The form and information required in the registration shall be determined by the Commission and shall include all data necessary to establish annual requirements under this chapter. The Commission shall use the information provided in the registration to determine whether the entity shall be considered an obligated party and the amount of its annual requirement.

(2) At a minimum, the Commission shall require registration information to include legal name; doing business as name, if applicable; municipality; state; types of heating fuel sold; and the volume of sales of heating fuels into or in the State for final sale or consumption in the State in the calendar year immediately

preceding the calendar year in which the entity is registering with the Commission.

(3)(A) The Department of Taxes shall annually provide to the Commission a copy of the forms that were submitted by the entities that pay the existing fuel tax established in 33 V.S.A. § 2503(a)(1) and (2). If any form contains a Social Security number, the Department of Taxes shall redact that information before submitting a copy of the form to the Commission. Notwithstanding any other provision of law, including 33 V.S.A. § 2503(c) and any confidentiality provisions that would normally apply to tax forms, the fuel tax forms submitted pursuant to 33 V.S.A. § 2503(a)(1) and (2) shall be public documents, and the Commission shall make those documents publicly available.

(B) The Department of Taxes shall ensure that the fuel tax form required under 33 V.S.A. § 2503(a)(1) and (2) includes a prominent notice explaining that, pursuant to this section, the form will be provided to the Public Utility Commission and will be made publicly available.

(C) The Department of Taxes shall further ensure that the fuel tax form requires that each submitting entity list the exact amount of gallons of each fuel type.

separated by type, that was sold in Vermont, as well as a list of the exact amount of gallons of each fuel type, separated by type, that was purchased by the submitting entity and the name and location of the entity from which it was purchased.

(4) Each year, and not later than 30 days following the annual registration deadline established by the Commission, the Commission shall share complete registration information of obligated parties with the Agency of Natural Resources and the Department of Public Service for purposes of

updating the Vermont Greenhouse Gas Emissions Inventory and Forecast and meeting the requirements of 10 V.S.A. § 591(b)(3).

(5) The Commission shall maintain, and update annually, a list of registered entities on its website that contains the required registration information.

(6) For any entity not registered on or before January 31, 2024, the first registration form shall be due 30 days after the first sale of heating fuel to a location in Vermont.

(7) Clean heat requirements shall transfer to entities that acquire an obligated party.

(8) Entities that cease to operate shall retain their clean heat requirement for their final year of operation.

(c) Early action credits. Beginning on January 1, 2023, clean heat measures that are installed and provide emission reductions are creditable. Upon the establishment of the clean heat credit system, entities may register credits for actions taken starting in 2023.

(d) Equitable distribution of clean heat measures.

(1) The Clean Heat Standard shall be designed and implemented to enhance social equity by prioritizing customers with low income, moderate income, those households with the highest

energy burdens, and renter households with tenant-paid energy bills. The design shall ensure all customers have an equitable opportunity to participate in, and benefit from, clean heat measures regardless of heating fuel used, income level, geographic location, residential building type, or homeownership status.

(2) Of their annual requirement, each obligated party shall retire at least 16 percent from customers with low income and 16 percent from customers with moderate income. For each of these groups, at least one-half of these credits shall be from installed clean heat measures that require capital investments in homes, have measure lives of 10 years or more, and are estimated by the Technical Advisory Group to lower annual energy bills. Examples shall include weatherization improvements and installation of heat pumps, heat pump water heaters, and advanced wood heating systems. The Commission may identify additional measures that qualify as installed measures.

(3) The Commission shall **consider** frontloading **ing** the credit requirements for customers with low income and moderate income so that the greatest proportion of clean heat measures reach

Vermonters with low income and moderate income in the earlier years.

(4) With consideration to how to best serve customers with low income and moderate income, the Commission shall have authority to change the percentages established in subdivision (2) of this subsection for good cause after consultation with the Equity Advisory Group, notice, and opportunity for public process. Good cause may include a shortage of clean heat credits or undue adverse financial impacts on particular customers or demographic segments.

(5) In determining whether to exceed the minimum percentages of clean heat measures that must be delivered to customers with low income and moderate income, the Commission shall take into account participation in other government-sponsored low-income and moderate-income weatherization programs.

(6) A clean heat measure delivered to a customer qualifying for a government-sponsored, low-income energy subsidy shall qualify for clean heat credits required by subdivision (2) of this subsection.

(7) Customer income data collected shall be kept confidential by the Commission, the Department of Public Service,

the obligated parties and any entity that delivers clean heat measures.

(e) Credit banking. The Commission shall allow an obligated party that has met its annual requirement in a given year to retain clean heat credits in excess of that amount for future sale or application to the obligated party's annual requirements in future compliance periods, as determined by the Commission.

(f) Enforcement.

(1) The Commission shall have the authority to enforce the requirements of this chapter and any rules or orders adopted to implement the provisions of this chapter. The Commission may use its existing authority under this title. As part of an enforcement order, the Commission may order penalties and injunctive relief.

(2) The Commission shall order an obligated party that fails to retire the number of clean heat credits required in a given year, including the required amounts from customers with low income and moderate income, to make a noncompliance payment to the default delivery agent. The per-credit amount of the noncompliance payment shall be four times the amount established by the

Commission for timely per-credit payments to the default delivery agent.

(3) False or misleading statements or other representations made to the

Commission by obligated parties related to compliance with the Clean Heat Standard are subject to the Commission's enforcement authority, including the power to investigate and assess penalties, under this title.

(4) The Commission's enforcement authority does not in any way impede the enforcement authority of other entities, such as the Attorney

General's office.

(5) Failure to register with the Commission as required by this section is a violation of the Consumer Protection Act in 9 V.S.A. chapter 63.

(g) Records. The Commission shall establish requirements for the types of records to be submitted by obligated parties, a record retention schedule for required records, and a process for verification of records and data submitted in compliance with the requirements of this chapter.

(h) Reports.

(1) As used in this subsection, "standing committees" means the House Committee on Environment and Energy and the

Senate Committees on Finance and on Natural Resources and Energy.

(2) After the adoption of the rules implementing this chapter, the Commission shall submit a written report to the standing committees detailing the efforts undertaken to establish the Clean Heat Standard pursuant to this chapter.

(3) On or before January 15 of each year following the year in which the rules are first adopted under this chapter, the Commission shall submit to the standing committees a written report detailing the implementation and operation of the Clean Heat Standard. This report shall include an assessment on the equitable adoption of clean heat measures required by subsection (d) of this section, along with recommendations to increase participation for the households with the highest energy burdens. The provisions of 2 V.S.A. § 20(d) (expiration of required reports) shall not apply to the report to be made under this subsection.

§ 8125. DEFAULT DELIVERY AGENT

(a) Default delivery agent designated. In place of obligated-party specific programs, the Commission shall provide for the development and implementation of Statewide clean heat programs and measures by one or

more default delivery agents appointed by the Commission for these purposes.
The Commission may specify that appointment of a default delivery agent to
deliver clean heat services, on behalf of obligated entities who pay the
percredit fee to the default delivery agent, satisfies those entities'
corresponding obligations under this chapter.

(b) Appointment. The default delivery agent shall be one or more
statewide entities capable of providing a variety of clean heat measures. The
designation of an entity under this subdivision may be by order of appointment
or contract. A designation, whether by order of appointment or by contract,
may only be issued after notice and opportunity for hearing. An existing order
of appointment issued by the Commission under section 209 of this title may
be amended to include the responsibilities of the default delivery agent. An
order of appointment shall be for a limited duration not to exceed 12 years,
although an entity may be reappointed by order or contract. An order of
appointment may include any conditions and requirements that the

Commission deems appropriate to promote the public good. For good
cause, after notice and opportunity for hearing, the Commission may amend or
revoke an order of appointment.

(c) Supervision. Any entity appointed by order of appointment under this
section that is not an electric or gas utility already regulated under this title

shall not be considered to be a company as defined under section 201 of this title, but shall be subject to the provisions of sections 18–21, 30–32, 205–208, subsection 209(a), sections 219, 221, and subsection 231(b) of this title, to the same extent as a company as defined under section 201 of this title. The Commission and the Department of Public Service shall have jurisdiction under those sections over the entity, its directors, receivers, trustees, lessees, or other persons or companies owning or operating the entity and of all plants, equipment, and property of that entity used in or about the business carried on by it in this State as covered and included in this section. This jurisdiction shall be exercised by the Commission and the Department so far as may be necessary to enable them to perform the duties and exercise the powers conferred upon them by law. The Commission and the Department each may, when they deem the public good requires, examine the plants, equipment, and property of any entity appointed by order of appointment to serve as a default delivery agent.

(d) Use of default delivery agent.

(1) An obligated party shall meet its annual requirement through a designated default delivery agent appointed by the Commission, unless the obligated party elects to meet its requirement, in whole or in part, through one or more other mechanisms pursuant to subsection 8122(c) of this title.

(2) The Commission shall provide a form for an obligated party to indicate its election to meet its requirement. The form shall require sufficient information to determine the nature of the credits that the default delivery agent will be responsible to deliver if the obligated party elects to meet its obligation in part. The Commission shall make such elections known to the default delivery agent as soon as practicable.

(3) The Commission shall by rule or order establish a standard timeline under which the default delivery agent credit cost or costs are established and by which an obligated party must file its election form. The Commission shall provide not less than 120 days' notice of default delivery agent credit cost or costs prior to the deadline for an obligated party to file its election form so an obligated party can assess options and inform the Commission of its intent to procure credits in whole or in part as fulfillment of its requirement.

(4) The default delivery agent shall deliver creditable clean heat measures either directly or indirectly to end-use customer locations in Vermont sufficient to meet the total aggregated annual requirement assigned to it pursuant to this subsection, along with any

additional amount achievable through noncompliance payments as described in subdivision (f)(2) of this section.

(e) Budget.

(1) The Commission shall open a proceeding on or before July 1, 2023 and every three years thereafter to establish the default delivery agent credit cost or costs for the subsequent three-year period.

That proceeding shall include:

(A) an initial potential study conducted by the Department of Public Service to include a quantification of available thermal resources, thermal market conditions, and Statewide and regional thermal workforce characteristics;

(B) the development of a three-year plan and associated proposed budget by the default delivery agent; and

(C) opportunity for public participation.

(2) Once the Commission provides the default delivery agent with the obligated parties' election information, the default delivery agent shall be granted the opportunity to amend its plan and budget before the Commission.

(f) Compliance funds. All funds received from noncompliance payments pursuant to section 8124 (f)(2) shall be used by the default delivery agent to provide clean heat measures to customers with low income.

(g) Specific programs. The default delivery agent shall create specific programs for multiunit dwellings, condo associations, renters, and for manufactured homes so these groups have an equal opportunity to benefit from the Clean Heat Standard.

§ 8126. RULEMAKING

(a) The Commission shall adopt rules and may issue orders to implement and enforce the Clean Heat Standard program.

(b) The requirement to adopt rules does not in any way impair the Commission's authority to issue orders or take any other actions, both before and after final rules take effect, to implement and enforce the Clean Heat Standard.

(c) The Commission's rules may include a provision that allows the Commission to revise its Clean Heat Standard rules by order of the Commission without the revisions being subject to the rulemaking requirements of the 3 V.S.A. chapter 25, provided the Commission:

- (1) provides notice of any proposed changes,
- (2) allows for a 30-day comment period, and

(3) responds to all comments received on the proposed change.

(d) Any order issued under this chapter shall be subject to appeal to the Vermont Supreme Court under section 12 of this title, and the Commission must immediately file any orders, a redline, and clean version of the revised rules with the Secretary of State, with notice simultaneously provided to the House Committee on Environment and Energy and the Senate Committees on Finance and on Natural Resources and Energy.

§ 8127. TRADEABLE CLEAN HEAT CREDITS

(a) Credits established. By rule or order, the Commission shall establish or adopt a system of tradeable clean heat credits that are earned by reducing greenhouse gas emissions through the delivery of clean heat measures. While credit denominations may be in simple terms for public understanding and ease of use, the underlying value shall be based on units of carbon dioxide equivalent (CO₂e). The system shall provide a process for the recognition, approval, and monitoring of the clean heat credits. The Department of Public Service shall perform the verification of clean heat credit claims and submit results of the verification and evaluation to the Commission annually.

(b) Credit ownership. The Commission, in consultation with the Technical Advisory Group, shall establish a standard methodology for determining what party or parties shall be the initial owner of a clean heat credit upon its

creation. The original owner or owners may transfer those credits to a third party or to an obligated party.

(c) Credit values. Clean heat credits shall be based on the accurate and verifiable lifecycle CO₂e emission reductions in Vermont's thermal sector that result from the delivery of eligible clean heat measures to existing or new enduse customer locations into or in Vermont.

(1) For clean heat measures that are installed, credits will be created for each year of the expected life of the installed measure. The annual value of the clean heat credits for installed measures in each year shall be equal to the lifecycle CO₂e emissions of the fuel use that is avoided in a given year because of the installation of the measure, minus the lifecycle emissions of the fuel that is used instead in that year.

(2) For clean heat measures that are fuels, clean heat credits will be created only for the year the fuel is delivered to the end-use customer. The value of the clean heat credits for fuels shall be the lifecycle CO₂e emissions of the fuel use that is avoided, minus the lifecycle CO₂e emissions of the fuel that is used instead.

(d) List of eligible measures. Eligible clean heat measures delivered to or installed in Vermont shall include:

- (1) thermal energy efficiency improvements and weatherization;
- (2) cold-climate air, ground source, and other heat pumps, including district, network, grid, microgrid, and building geothermal systems;
- (3) heat pump water heaters;
- (4) utility-controlled electric water heaters;
- (5) solar hot water systems;
- (6) electric appliances providing thermal end uses;
- (7) advanced wood heating;
- (8) noncombustion or renewable energy-based district heating services;
- (9) the supply of sustainably sourced biofuels;
- (10) the supply of green hydrogen; and
- (11) the replacement of a manufactured home with a high efficiency manufactured home.

(e) Renewable natural gas. For p Pipeline renewable natural gas and other renewably generated natural gas substitutes to be eligible, an obligated party shall purchase renewable natural gas and its associated renewable attributes and demonstrate that it has secured a contractual pathway for the physical delivery of the gas from the point of injection into the pipeline to the obligated party's delivery system.—shall not qualify unless that particular gas (a) would

otherwise have been vented, and (b) no other regulation presently in force would require the biogas from which it was derived to be reduced, captured, or flared.

(f) The Commission shall establish enforceable limits so that no more than 15% of annual clean heat measures shall be derived from the sum total of liquid biofuels and renewable natural gas in 2025, no more than 10% of annual clean heat measures shall be derived from the sum total of liquid biofuels and renewable natural gas in 2030 and phase out (0% of clean heat measures) all liquid biofuels and renewable natural gas by 2050.

(g) Carbon intensity of fuels.

(1) To be eligible as a clean heat measure, a liquid or gaseous the clean heat measure shall have a carbon intensity value as follows:

(A) below 80 in 2025;

(B) below 60 in 2030; and

(C) below 20 in 2050, provided the Commission may allow liquid and gaseous clean heat measures with a carbon intensity value greater than 20 if excluding them would be impracticable based on the characteristics of Vermont's buildings, the workforce available in

Vermont to deliver lower carbon intensity clean heat measures, cost, or the effective administration of the Clean Heat Standard.

(2) The Commission shall establish and publish the rate at which carbon intensity values shall decrease annually for liquid and gaseous clean heat measures consistent with subdivision (1) of this subsection as follows: (A) on or before January 1, 2025 for 2025 to 2030; and

(B) on or before January 1, 2030 for 2031 to 2050.

(3) For the purpose of this section, the carbon intensity values shall be understood relative to No. 2 fuel oil delivered into or in Vermont in 2023 having a carbon intensity value of 100. Carbon intensity values shall be measured based on fuel pathways.

(h) The Commission shall establish enforceable limits so that green hydrogen is produced only on the site where it is used with new and dedicated electricity from in-state 100% Tier 2 and limit its use to the hardest to decarbonize high heat industrial processes. Green hydrogen must not be distributed off its production site.

(i) Efficiency. A renewable electricity system or district heating system using biomass fuel must achieve overall system efficiency of at least 60% on an annual basis to qualify as a clean heat measure.

(j) Emissions schedule.

(1) To promote certainty for obligated parties and clean heat providers, the Commission shall, by rule or order, establish a schedule of lifecycle emission rates for heating fuels and any fuel that is used in a clean heat measure, including electricity, or is itself a clean heat measure, including biofuels. The schedule shall be based on transparent, verifiable, and accurate emissions accounting **adapting the Argonne National Laboratory GREET Model, Intergovernmental Panel on Climate Change (IPCC) modeling, or an alternative of comparable analytical rigor to fit the Vermont thermal sector context,** and **meet** the requirements of 10 V.S.A. § 578(a)(2) and (3).

(2) For each fuel pathway, the schedule shall account for greenhouse gas emissions from biogenic and geologic sources, including fugitive emissions and loss of stored carbon, **and shall not assume that biogenic fuels are carbon neutral.** In determining the baseline emission rates for clean heat measures that are fuels, emissions baselines shall fully account for methane emissions reductions or captures already occurring, or expected to occur, for each fuel pathway as a result of local, State, or federal policies that have been enacted or adopted.

(3) The schedule may be amended based upon changes in technology or evidence on emissions, but clean heat credits previously awarded or already under contract to be produced shall not be adjusted retroactively.

(k) Review of consequences. The Commission shall biennially assess harmful consequences that may arise in Vermont or elsewhere from the implementation of clean heat measures and shall set standards or limits to prevent those consequences. Such consequences shall include deforestation or forest degradation, conversion of grasslands, increased emissions of criteria pollutants, damage to watersheds, or the creation of new methane to meet fuel demand.

(l) Time stamp. Clean heat credits shall be “time stamped” for the year in which the clean heat measure delivered emission reductions. For each subsequent year during which the measure produces emission reductions, credits shall be generated for that year. Only clean heat credits that have not been retired shall be eligible to satisfy the current year obligation.

(m) Delivery in Vermont. Clean heat credits shall be earned only in proportion to the deemed or measured thermal sector greenhouse gas emission reductions achieved by a clean heat measure delivered in Vermont. Other emissions offsets, wherever located, shall not be eligible measures.

(n) Credit eligibility.

(1) All eligible clean heat measures that are delivered in Vermont beginning on January 1, 2023 shall be eligible for clean heat credits and may be retired and count towards an obligated party's emission reduction obligations, regardless of who creates or delivers them and regardless of whether their creation or delivery was required or funded in whole or in part by other federal or State policies and programs. This includes individual initiatives, emission reductions resulting from the State's energy efficiency programs, the low-income weatherization program, and the Renewable Energy Standard Tier 3 program. Clean heat measures delivered or installed pursuant to any local, State, or federal program or policy may count both towards goals or requirements of such programs and policies and be eligible clean heat measures that count towards the emission reduction obligations of this chapter.

(2) The owner or owners of a clean heat credit are not required to sell the credit.

(3) Regardless of the programs or pathways contributing to clean heat credits being earned, an individual credit may be counted

only once towards satisfying an obligated party's emission reduction obligation.

(o) Credit registration.

(1) The Commission shall create an administrative system to register, sell, transfer, and trade credits to obligated parties. The Commission may hire a third-party consultant to evaluate, develop, implement, maintain, and support a database or other means for tracking clean heat credits and compliance with the annual requirements of obligated parties.

(2) The system shall require entities to submit the following information to receive the credit: the location of the clean heat measure, whether the customer or tenant has a low or moderate income, the type of property where the clean heat measure was installed or sold, the type of clean heat measure, and any other information as required by the Commission. Customer income data collected shall be kept confidential by the Commission, the Department of Public Service, the obligated parties and any entity that delivers clean heat measures.

(p) Greenhouse Gas Emissions Inventory and Forecast. Nothing in this chapter shall limit the authority of the Secretary of Natural Resources to compile and publish the Vermont Greenhouse Gas Emissions Inventory and

Forecast in accordance with 10 V.S.A. § 582.

§ 8128. CLEAN HEAT STANDARD TECHNICAL ADVISORY GROUP

(a) The Commission shall establish the Clean Heat Standard Technical Advisory Group (TAG) to assist the Commission in the ongoing management of the Clean Heat Standard. Its duties shall include:

(1) establishing and revising the lifecycle carbon dioxide equivalent (CO₂e) emissions accounting methodology to be used to determine each obligated party's annual requirement pursuant to subdivision 8124(a)(2) of this chapter;

(2) establishing and revising the clean heat credit value for different clean heat measures;

(3) periodically assessing and reporting to the Commission on the sustainability of the production of clean heat measures by considering factors including greenhouse gas emissions; carbon sequestration and storage; human health impacts; land use changes; ecological and biodiversity impacts; groundwater and surface water impacts; air, water, and soil pollution; and impacts on food costs;

(4) setting the expected life length of clean heat measures for the purpose of calculating credit amounts;

(5) establishing credit values for each year over a clean heat measure's expected life, including adjustments to account for increasing

interactions between clean heat measures over time so as to not double-count emission reductions;

(6) facilitating the program's coordination with other energy programs;

(7) calculating the impact of the cost of clean heat credits and the cost savings associated with delivered clean heat measures on per-unit heating fuel prices;

(8) coordinating with the Agency of Natural Resources to ensure that greenhouse gas emissions reductions achieved in another sector through the implementation of the Clean Heat Standard are not double-counted in the Vermont Greenhouse Gas Emissions Inventory and Forecast;

(9) advising the Commission on the periodic assessment and revision requirement established in subdivision 8124(a)(3) of this chapter; and

(10) any other matters referred to the TAG by the Commission.

(b) Members of the TAG shall be appointed by the Commission and shall include the Department of Public Service, the Agency of Natural Resources, Department of Health, and parties who have, or whose representatives have, expertise in one or more of the following areas: technical and analytical expertise in measuring lifecycle greenhouse gas emissions, energy modeling and data analysis, clean heat measures and energy technologies, sustainability and non-greenhouse gas emissions strategies designed to reduce and avoid

impacts to the environment, public health impacts of air quality and climate change, delivery of heating fuels, land use changes, deforestation and forest degradation, and climate change mitigation policy and law. The Commission shall accept and review motions to join the TAG from interested parties who have, or whose representatives have, expertise in one or more of the areas listed in this subsection. Members who are not otherwise compensated by their employer shall be entitled to per diem compensation and reimbursement for expenses under 32 V.S.A. § 1010. Members of the public shall have the opportunity to attend and comment at all meetings of the TAG.

(c) The Commission shall hire a third-party consultant responsible for developing clean heat measure characterizations and relevant assumptions, including CO₂e lifecycle emissions analyses. The TAG shall provide input and feedback on the consultant's work. The Commission may use appropriated funds to hire the consultant.

(d) Emission analyses and associated assumptions developed by the consultant shall be reviewed and approved annually by the Commission. In reviewing the consultant's work, the Commission shall provide a public comment period on the work. The Commission may approve or adjust the consultant's work as it deems necessary based on its review and the public comments received.

§ 8129. CLEAN HEAT STANDARD EQUITY ADVISORY GROUP

(a) The Commission shall establish the Clean Heat Standard Equity Advisory Group to assist the Commission in developing and implementing the Clean Heat Standard in a manner that ensures an equitable share of clean heat measures are delivered to Vermonters with low income and moderate income, **that environmental justice populations are not disproportionately impacted by pollution resulting from implementation of the Clean Heat Standard**, and that Vermonters with low income and moderate income who are not early participants in clean heat measures are not negatively impacted in their ability to afford heating fuel. Its duties shall include:

- (1) providing feedback to the Commission on strategies for engaging Vermonters with low income and moderate income in the public process for developing the Clean Heat Standard program;
- (2) supporting the Commission in assessing whether customers are equitably served by clean heat measures and how to increase equity;
- (3) identifying actions needed to provide customers with low income and moderate income with better service and to mitigate the fuel price impacts calculated in section 8128 of this title;

(4) recommending any additional programs, incentives, or funding needed to support customers with low income and moderate income and organizations that provide social services to Vermonters in affording heating fuel and other heating expenses;

(5) providing feedback to the Commission on the impact of the Clean Heat Standard on the experience of Vermonters with low income and moderate income; and

(6) providing information to the Commission on the challenges renters face in equitably accessing clean heat measures and recommendations to ensure that renters have equitable access to clean heat measures; and

(7) assisting the Commission in assessing the health impact from the implementation of the Clean Heat Standard program on environmental justice communities in Vermont and providing recommendations for improvements.

(b)The Clean Heat Standard Equity Advisory Group shall consist of up to 10 members appointed by the Commission and at a minimum shall include at least one representative from each of the following groups: the Department of

Public Service; the Department for Children and Families' Office of Economic Opportunity; the Department of Public Health; the Environmental Justice Advisory Council, community action agencies; Efficiency Vermont; individuals with socioeconomically, racially, and geographically diverse backgrounds; renters; rental property owners; the Vermont Housing Finance Agency; and a member of the Vermont Fuel Dealers Association. Members who are not otherwise compensated by their employer shall be entitled to per diem compensation and reimbursement for expenses under 32 V.S.A. § 1010.

§ 8130. SEVERABILITY

If any provision of this chapter or its application to any person or circumstance is held invalid or in violation of the Constitution or laws of the United States or in violation of the Constitution or laws of Vermont, the invalidity or the violation shall not affect other provisions of this chapter that can be given effect without the invalid provision or application, and to this end, the provisions of this chapter are severable.

§ 8131. RULEMAKING AUTHORITY

Notwithstanding any other provision of law to the contrary, the Commission shall not file proposed rules with the Secretary of State or issue any orders implementing the Clean Heat Standard without specific authorization enacted by the General Assembly.

Sec. 4. 10 V.S.A. § 582 is amended to read:

§ 582. GREENHOUSE GAS INVENTORIES; REGISTRY

(a) Inventory and forecasting. The Secretary shall work, in conjunction with other states or a regional consortium, to establish a periodic and consistent inventory of greenhouse gas emissions. The Secretary shall publish the Vermont Greenhouse Gas Emission Inventory and Forecast by ~~no~~ not later than June 1, 2010, and updates shall be published annually until 2028, until a regional or national inventory and registry program is established in which Vermont participates, or until the federal National Emissions Inventory includes mandatory greenhouse gas reporting. The Secretary of Natural Resources shall include a sensitivity analysis in the Vermont Greenhouse Gas Emissions Inventory and Forecast that measures the lifecycle greenhouse gas emissions of liquid, gaseous, and solid biogenic fuels combusted in Vermont.

* * *

Sec. 5. 32 V.S.A. § 3102 is amended to read:

§ 3102. CONFIDENTIALITY OF TAX RECORDS

(a) No present or former officer, employee, or agent of the Department of Taxes shall disclose any return or return information to any person who is not an officer, employee, or agent of the Department of Taxes except in

accordance with the provisions of this section. A person who violates this section shall be fined not more than \$1,000.00 or imprisoned for not more than one year, or both; and if the offender is an officer or employee of this State, the offender shall, in addition, be dismissed from office and be incapable of holding any public office for a period of five years thereafter.

* * *

(d) The Commissioner shall disclose a return or return information:

* * *

(9) To the Public Utility Commission and the Department of Public Service for purposes of providing information related to the fuel tax imposed under 33 V.S.A. § 2503 necessary to administer the Clean Heat Standard established in 30 V.S.A. chapter 94.

* * *

Sec. 6. PUBLIC UTILITY COMMISSION IMPLEMENTATION

(a) Commencement. On or before August 31, 2023, the Public Utility Commission shall commence a proceeding to implement Sec. 3 (Clean Heat Standard) of this act.

(b) Facilitator. The Commission may hire a third-party consultant to design and conduct public engagement. The Commission may use funds appropriated under this act on hiring the consultant.

(c) Public engagement process. Before commencing rulemaking, the Commission shall use the forms of public engagement described in this subsection to inform the design and implementation of the Clean Heat Standard. Any failure by the Commission to meet the specific procedural requirements of this section shall not affect the validity of the Commission's actions.

(1) The Commission shall allow any person to register at any time in the Commission's online case management system, ePUC, as a participant in the Clean Heat Standard proceeding. All members of the Equity Advisory Group shall be made automatic participants to that proceeding. All registered participants in the proceeding, including all members of the Equity Advisory Group, shall receive all notices of public meetings and all notices of opportunities to comment in that proceeding.

(2) The Commission shall hold at least six public hearings or workshops that shall be recorded and publicly posted on the Commission's website or on ePUC. These meetings shall be open to everyone, including all stakeholders, members of the public, and all other potentially affected parties.

(3) The Commission also shall provide at least three opportunities for the submission of written comments. Any person may submit written comments to the Commission.

(4) The Commission shall invite organizations and communities recommended by the Equity Advisory Group to participate in the Commission's public meetings and opportunities to comment.

(d) Advertising. The Commission shall use funding appropriated in this act on advertising the public meetings in order to provide notice to a wide variety of segments of the public.

(e) Draft proposed rules. The Commission shall publish draft proposed rules publicly and provide notice of them through the Commission's online case management system, ePUC, to the stakeholders in this rulemaking who registered their names and e-mail addresses with the Commission through ePUC. The Commission shall provide a 30-day comment period on the draft and accept written comments from the public and stakeholders. The Commission shall consider changes in response to the public comments before filing the proposed rules with the Secretary of State and the Legislative Committee on Administrative Rules.

(f) Final rules.

(1) On or before January 15, 2025, the Commission shall submit to the

General Assembly final proposed rules to implement the Clean Heat Standard.

The Commission shall not file the final proposed rules with the Secretary of State until specific authorization is enacted by the General Assembly to do so.

(2) Notwithstanding 3 V.S.A. §§ 820, 831, 836–840, and 841(a), upon affirmative authorization enacted by the General Assembly authorizing the adoption of rules implementing the Clean Heat Standard, the Commission shall file, as the final proposed rule, the rules implementing the Clean Heat Standard approved by the General Assembly with the Secretary of State and Legislative Committee on Administrative Rules pursuant to 3 V.S.A. § 841. The filing shall include everything that is required under 3 V.S.A. §§ 838(a)(1)–(5), (8)–

(13), (15), and (16) and 841(b)(1).

(3) The review, adoption, and effect of the rules implementing the Clean Heat Standard shall be governed by 3 V.S.A. §§ 841(c); 842, exclusive of subdivision (b)(4); 843; 845; and 846, exclusive of subdivision (a)(3).

(4) Once adopted and effective, any amendments to the rules implementing the Clean Heat Standard shall be made in accordance with the Administrative Procedure Act, 3 V.S.A. chapter 25.

(g) Consultant. The Commission may contract with a consultant to assist with implementation of 30 V.S.A. § 8127 (clean heat credits).

(h) Funding. On or before January 15, 2024, the Commission shall report to the General Assembly on suggested revenue streams that may be used or created to fund the Commission's administration of the Clean Heat Standard program.

(i) Check-back reports. On or before February 15, 2024 and January 15, 2025, the Commission shall submit a written report to and be available to provide oral testimony to the House Committee on Environment and Energy and the Senate Committees on Finance and on Natural Resources and Energy detailing the efforts undertaken to establish the Clean Heat Standard. The reports shall include, to the extent available, estimates of the impact of the Clean Heat Standard on customers, including impacts to customer rates and fuel bills for participating and nonparticipating customers, net impacts on total spending on energy for thermal sector end uses, fossil fuel reductions, greenhouse gas emission reductions, and, if possible, impacts on economic

activity and employment. The modeled impacts shall estimate high-, medium-, and low-price impacts. The reports shall recommend any legislative action needed to address enforcement or other aspects of the Clean Heat Standard.

(j) Assistance. The Agency of Commerce and Community Development, the Department of Public Service, and other State agencies and departments shall assist the Commission with economic modeling for the required reports and rulemaking process.

Sec. 7. PUBLIC UTILITY COMMISSION AND DEPARTMENT OF
PUBLIC SERVICE POSITIONS; APPROPRIATION

(a) The following new positions are created in the Public Utility Commission for the purpose of carrying out this act:

- (1) one permanent exempt Staff Attorney;
- (2) one permanent exempt Analyst; and
- (3) one limited-service exempt Analyst.

(b) The sum of \$825,000.00 is appropriated to the Public Utility Commission from the General Fund in fiscal year 2024 for the positions established in subsection (a) of this section; for all consultants required by this act; and for additional operating costs required to implement the Clean Heat Standard, including marketing and public outreach for Sec. 6 of this act.

(c) The following new positions are created in the Department of Public Service for the purpose of carrying out this act:

(1) one permanent exempt Staff Attorney; and

(2) two permanent classified Program Analysts.

(d) The sum of \$900,000.00 is appropriated to the Department of Public Service from the General Fund in fiscal year 2024 for the positions established in subsection (c) of this section, to retain consultants that may be required to support verification and evaluation required by 30 V.S.A. § 8127(a), for conducting the potential study, and for associated operating costs related to the implementation of the Clean Heat Standard.

Sec. 8. EFFECTIVE DATE

This act shall take effect on passage except that advanced wood heating shall not be considered an eligible clean heat measure until January 1, 2025 or after the US environmental protection agency promulgates updated New Source Performance Standards for residential wood heating appliances.